In the Claims

The claims currently pending in the application are as follows. Claims 1 and 2 have been amended herein. New claims 3-15 have been added.

1. (currently amended) A device for reading and/or writing information from/onto an optical information carrier ~~(1)~~, said information stored in the form of differences in intensity level, said device comprising:

read means including imaging means ~~(21, 22, 23)~~ for imaging a radiation beam ~~(24)~~ so as to form a scanning spot ~~(11)~~ by means of which the information carrier ~~(1)~~ is scanned, ~~and~~ including detection means ~~(26)~~ for generating a read signal (S_{LS}) which is indicative of the intensity of the radiation reflected from the information carrier ~~(1)~~ at the location of the scanning spot ~~(11)~~;,;

which device has an information transfer mode, in which the scanning spot ~~(11)~~ is moved in a first direction (R1) with respect to the information carrier ~~(1)~~;,;

which device has a displacement mode, in which the scanning spot ~~(11)~~ is moved in a second direction (R2) transverse to the first direction ;,;

control means ~~(40, 41)~~ for controlling the imaging means ~~(21, 22, 23)~~ in response to a measurement signal (FE) which is indicative of the degree of focusing of the radiation beam ~~(24)~~ at the location of the scanning spot ~~(11)~~, which control means include sample and hold means ~~(40)~~ for sampling and holding the measurement signal (FE) in response to a sample signal (S_{CNTRL}), wherein ~~characterized in that~~ the sample signal (S_{CNTRL}) causes the measurement signal (FE) to be sampled ~~when said intensity is comparatively high~~ at locations having mutually the same intensity level.

2. (currently amended) A device as claimed in Claim 1, the device further including means ~~(72)~~ for measuring the time during which the measurement signal is held and means ~~(73, 74, 75)~~ for causing the measurement signal to be sampled when the time exceeds a predetermined value (T_{REF}).

3. (new) A device for reading and recording information on an optical information carrier, said information carrier having information stored therewithin as patterns formed by differences in intensity levels, said device comprising:

a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and proximate said optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and for generating a read signal (S_{LS}) which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot, said read system further adapted to derive, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

a signal separation system operatively coupled to said read system, said signal separation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level.

4. (new) The device of claim 3, wherein said intensity of said scanning spot is an indicator of a location of the scanning spot with respect to the patterns provided in the information carrier.

5. (new) The device of claim 3, wherein said sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said signal separation system.

6. (new) The device of claim 3, wherein said signal separation system comprises:

a first input node for receiving said information signal;

a second input node for receiving a clock signal;

an output node for providing an output signal, wherein said output signal is said sample

signal;

an AND gate having a first input connected to said first input node, and a second input connected to said second input node, said AND gate having an output for an AND gate output signal;

a counter having a clock input connected to said second input node, said counter having an output for a counter output signal, and an inverted reset input;

a comparator having a reference input and a counter input, said counter input adapted to receive the counter output signal, said comparator also having an output for a comparator output signal;

an OR gate having a first input for receiving said AND gate output signal, and a second input for receiving said comparator output signal, said OR gate having an output for an OR gate output signal, said OR gate output signal connected to said sample signal; and

an inverter having a first input connected to said OR gate output for receiving said OR gate output signal, said inverter having an output for an inverter output signal, said inverter output connected to said inverted reset input of said counter.

7. (new) The device of claim 3, wherein said read system is adapted to operate in two operational modes:

an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and

a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

8. (new) The device of claim 3, wherein said read system further comprises a system for generating a logic signal which indicates that information is recorded on the information carrier in the form of differences in level of a surface of the information carrier.

9. (new) A method of reading information stored on an optical information carrier, said method comprising:

providing an optical information carrier, said optical information carrier having a multilevel structure, and said optical information carrier bearing data recorded as patterns formed in the information carrier by differences in intensity levels;

providing a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and proximate said optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and for generating a read signal (S_{LS}) which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot, said read system further adapted to derive, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

providing a signal separation system operatively coupled to said read system, said signal separation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level.

10. (new) The method of claim 9, wherein said intensity of said scanning spot is used as an indication of a location of the scanning spot with respect to the patterns provided in the information carrier.

11. (new) The method of claim 9, wherein said sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said signal separation system.

12. (new) The method of claim 9, wherein said signal separation system comprises:

a first input node for receiving said information signal;

a second input node for receiving a clock signal;

an output node for providing an output signal, wherein said output signal is said sample signal;

an AND gate having a first input connected to said first input node, and a second input connected to said second input node, said AND gate having an output for an AND gate output signal;

a counter having a clock input connected to said second input node, said counter having an output for a counter output signal, and an inverted reset input;

a comparator having a reference input and a counter input, said counter input adapted to receive the counter output signal, said comparator also having an output for a comparator output signal;

an OR gate having a first input for receiving said AND gate output signal, and a second input for receiving said comparator output signal, said OR gate having an output for an OR gate output signal, said OR gate output signal connected to said sample signal; and

an inverter having a first input connected to said OR gate output for receiving said OR gate output signal, said inverter having an output for an inverter output signal, said inverter output connected to said inverted reset input of said counter.

13. (new) The method of claim 9, wherein said read system is adapted to operate in two operational modes:

an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and

a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

14. (new) The method of claim 9, wherein said sampling of the measurement signal when said intensity is comparatively high results in a reduction of radial-to-vertical crosstalk.

15. (new) An apparatus for employing an optical information carrier, said apparatus comprising:

device for reading and recording information on said optical information carrier, said information carrier having information stored therewithin as patterns formed by differences in levels:

a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and proximate said optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and a device for deriving, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

a signal separation system operatively coupled to said read system, said signal separation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled when said intensity is comparatively high.